ABSTRACT

The invention (the process, its supporting devices, and applications) serves the endeavor of shellfish aquaculture. The invention improves and innovates: 1) tidally powered systems for raising shellfish seed , 2) grow-out, 3) brood stock conditioning, 4) market conditioning, & food supplement, 5) hatchery systems, 6) hatchery/nursery integration, resource sharing and optimization, ergonomics and economics, 7) water treatment, 8) Propulsion, 9) Anchorage, 10) Security, and 11) Devices for the Integration of Neighborhood Values and Shellfish Production. Such large increased economies of production suggest new uses for shellfish. Shellfish grow-out can provide cost effective and ecologically advantageous infrastructure benefits to eroding beaches, unstable channels, and water quality and the health of estuaries in general. The system is flexible in operation so that it may maximize the use of estuarine tidal energy and phytoplankton in order to maximize the ecological and economic benefits of the operation. The system is designed with particular attention to Virginia and Federal law so that permitting needs are minimized. Moreover the system is optimized to fit in well with the estuarine community and be a desirable, unobtrusive neighbor.